Biology - FSC Part 1 Biology English Medium Chapter 2 Preparation

Q1. Define heat capacity and gives its advantage,

Ans 1: The specific heat capacity of water is the number of calories required to raise the temperature of 1 gm of water from 15-16 Degree and it is 1 Degree.This is because much of the heat energy is used to break hydrogen bonds.Water work as temperature stabilizer for organisms in the environment and hence protects living materials against sudden thermal changes.

Q2. Write two protective function of water.

Ans 1: Water is effective lubricant which provides protection against damage from friction e.g tears protect eye surface from the rubbing of eyelids.
Water also from fluid cushion around organs and protect them from trauma.

Q3. What are Waxes?

Ans 1: Chemically waxes are mixture of long chains of alkanes and alcohols,ketones and esters of long chain fatty acids.

Q4. Differentiate between amylase and amylopectin starches.

Ans 1: Amylose Starch: Amylose starches have un-branched chains of glucose and are soluble in hot water.

Ans 2: Amylopectin:Amylopectin starches have branched chain are insoluble in cold and hot water.

Q5. Define monosaccharides with examples.

Ans 1: Monosaccharides are simplest,more sweet sugars,which can not be hydrolyzed into simpler sugars.example are Ribose,Glucose.

Q6. What are nucleohistones?

Ans 1: The nucleochistones are present in chromosomes.These conjugated proteins are not only of structural,but also are of functional significance. They play an important role in regulation of gene expression.

Q7. Differentiate between Nucleoside and Nucleotide.

Ans 1: Nucleoside : When nitrogen base and pentose sugar react it forms nucleoside.

Ans 2: Nucleotide: When nucleoside reacts with phosphate group it is called nucleotide.

Q8. Differentiate between anabolism and catabolism.

Ans 1: Anabolism: The reaction in which simpler substance are combined to from complex substance are called anabolism or anabolism reaction Anabolic reaction need energy.

Ans 2: Catabolsim:The reaction in which complex molecule are broken down into simpler once,are called catabolism or catabolic reactions.Energy is released in these reaction.

Q9. What are Lipids?Give two function of waxes.

Ans 1: The lipids are the heterogeneous group of compounds related to fatty acids is insoluble in water but soluble in organic solvents such as ether,alcohol,chloroform and benzene etc.
Waxes are wide spread as protective coating on fruits and leaves.
Waxes protect plants from water loss and abrasive damage.

Q10. Differentiate between glycosidic and peptide bond.

Ans 1: Glycosidic Bond:When two carbohydrates molecules react with each other and from bond with release of water molecule it is called glycoside bind.

Ans 2: Peptide Bond: When two amino acids react with each other and form a bond with release bond molecule it is called peptide bond.